Become An OMEGAMON Power User

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OMEGAMON And Monitoring Sessions At Share

- **14908: Become An OMEGAMON Power User**
  - ▶ Ed Woods - Monday, 11AM

- **14901: OMEGAMON V5 Enhanced 3270 Hands-on Lab**
  - ▶ Lih Wang – Monday, 1:30 PM

- **14614: OMEGAMON XE for Storage V5.2 Enhancements for z/OS 2.1**
  - ▶ Vickie Dault – Tuesday, 3 PM

- **14770: OMEGAMON Advanced Topics: User Interface Customization and the Tivoli Enterprise Portal – Hands-on Lab**
  - ▶ Ed Woods, Joe Means – Tuesday 6 PM

- **15190: IT Analytics and Big Data – Making Your Life Easier**
  - ▶ Paul Smith – Wednesday, 9:30 AM

- **14987: OMEGAMON XE for Storage – Hints and Tips to Improve Performance and Usage**
  - ▶ Deborah Reynolds – Wednesday, 11 AM

- **15277: Monitoring IMS Performance for Faster Problem Solving**
  - ▶ Lih Wang – Thursday, 9:30 AM

- **15273: OMEGAMON Thresholds, Profiles and User Interfaces**
  - ▶ Wayne Bucek – Thursday, 4:30 PM

Agenda

- What is a Power User?

- How to become A Power User

- OMEGAMON – Interfaces & Options

- OMEGAMON – Power User Examples

- OMEGAMON – Power User Resources

What Is A Power User?

- ## As defined by Wikipedia

  - ▶ "A power user is a user of a personal computer who has the ability to use advanced features of programs which are beyond the abilities of "normal" users"

- ## Ed Woods' definition

  - ▶ A user of computer technology who takes that technology and crafts it to more fully fill their needs
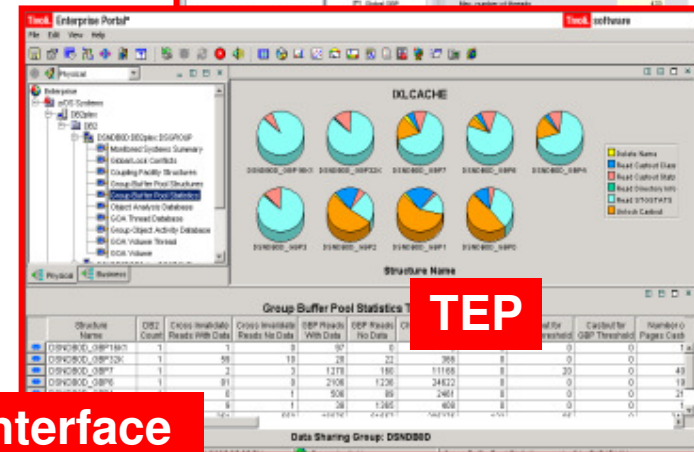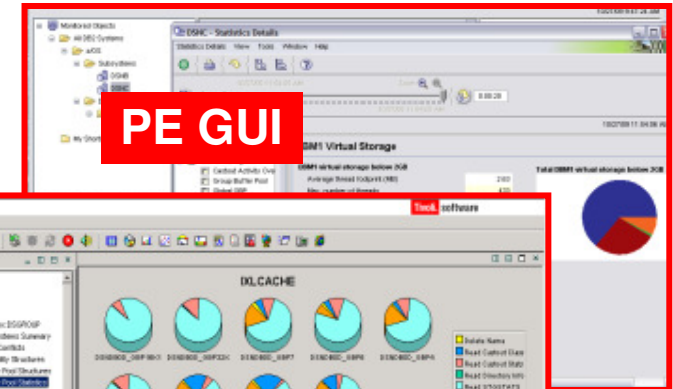
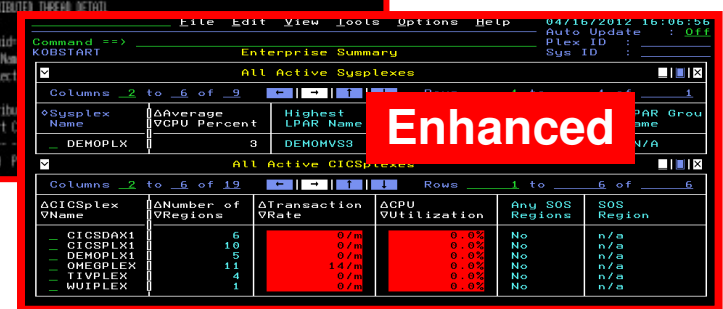# OMEGAMON XE
Options & Interfaces

- **GUI Interfaces**
  - ▸ **Tivoli Enterprise Portal (TEP)**
  - ▸ **OMEGAMON DB2 PE GUI**
  - ▸ **Real time and historical**
  - ▸ **Automation & alerts – Situations & Policies**

PE GUI

TEP

Each user interface offers particular capabilities and advantages

- **3270 interface**
  - ▸ **OMEGAMON Classic, CUA and Enhanced 3270**
  - ▸ **Real Time & Historical**
  - ▸ **Warning & Critical exception alerts**

Classic

Enhanced

OMEGAMON Classic Interface
Usage And Considerations

- "Classic" Interface - the original OMEGAMON interface
  - ▶ The "Big Four" OMEGAMONs offer Classic interface
    - z/OS, CICS, DB2, IMS

- OMEGAMON Classic Interface is the original ""Power User" interface
  - ▶ Fast and reliable
  - ▶ Powerful command driven
  - ▶ Flexible and customizable

- Typical Classic interface power user scenarios
  - ▶ Quickly create custom classic workspaces using major and minor commands
  - ▶ Screen logging
  - ▶ Timed screen facility – TSF

Classic Interface Example
OMEGAMON IMS - Classic 3270 Interface Main Menu

```
_____     ZMENU     VTM      OI-II    V510./C IMSA 07/30/13 13:36:33    B
> Help/News PF1            Exit PF3          Keys PF5            Command Mode PF12
> Return to CUA PA2        Colors PF18
>                 Enter a selection letter on the top line.
=================================================================================
>              OMEGAMON for IMS Performance Monitor Main Menu


_ E  EXCEPTIONS ....... Current and potential system problems, latch conflicts
_ R  RESPONSE TIME .... Transaction response times (RTA users)
_ B  BOTTLENECKS ..... Resource contention (bottleneck analysis) (DEXAN users)
_ H  TRANS HISTORY ... Application Trace and Journal Facility


_ M  MONITOR ......... IMS status, graphs, and time controlled operations
_ W  WORKLOAD ........ PSBs, DMBs, transactions, regions, and classes
_ Y  OTMA ........... OTMA status, TMEMBERs, and TPIPEs
_ L  LINES .......... Terminals, nodes, and lines
_ A  ALL POOLS ....... Communication, database, and program pools
_ C  COMPONENTS ...... I/O, logging, storage, and control blocks/modules


_ F  FAST PATH ....... IMS Fast Path information
_ O  OTHER SYSTEMS ... External subsystems (DB2 and MQ) an

_ T  TOOLS .......... Operator tools
_ P  PROFILE ........ Profile maintenance and session settings
>
=================================================================================
```

Select letter options to navigate to different displays

Classic Interface
MAJOR And minor Commands

```
_____     KOIRGNA   VTM      OI-II     V510./C IMSA 07/30/13 13:38:06      B
> Help PF1          Back PF3             Up PF7          Down PF8          Zoom PF11

>        To                  , enter

>  *-ALL REGIONS    B-CONTROL    C-DLI      D-DBRC          E-IRLM          F-MPP
>  G-FASTPATH       H-BMP        I-ESS      J-USER LIST     K-DEPENDENT
============================================================================
>                            All  Regions

> For more information about a region (RGNA), logical terminal (TERM),
> transaction (TRAN), scheduling class (CLAS), current referenced database
> (CDMB), or program specification block (PSBN), place the cursor on the
> appropriate

#RGNA          26


  RGNA  IMSAMAST  IMSADBRC   IMSADLI  IMSAIRLM CICSAOR1 CICSAOR1 CICSAOR1 CICSAOR1+
  rgid   --n/a--   --n/a--   --n/a--   --n/a--       30       28        5        4
  term   --n/a--   --n/a--   --n/a--   --n/a                                  --n/a--
  tran   --n/a--   --n/a--   --n/a--   --n/a--                               --none--
  psbn   --n/a--   --n/a--   --n/a--   --n/a-- --none-- --none-- --none-- --none--
  clas   --n/a--   --n/a--   --n/a--   --n/a-- --none-- --none-- --none-- --none--
  cdmb   --n/a--   --n/a--   --n/a--   --n/a--  --n/a--  --n/a--  --n/a--  --n/a--
```

Panel name

Version, profile, subsystem

MAJOR command

minor commands

Classic Interface Examples

- ## Detailed IMS subsystem, transaction, and region analysis is a common usage of the Classic interface

  ▸ Example - RGNA major commands with various minors

- ## Classic interface includes easy to use screen logging capabilities

  ▸ Have screen spaces logged to OMEGAMON sysout for later review

- ## Classic interface includes timer and screen automation capabilities

  ▸ Execute classic screen spaces at certain times of day Timed Screen Facility (TSF)

Creating A Custom Region Overview Screen

The MPP major command shows all the MPP message regions in the IMS subsystem.

Options could include using RGNA to show all the IMS regions, etc.
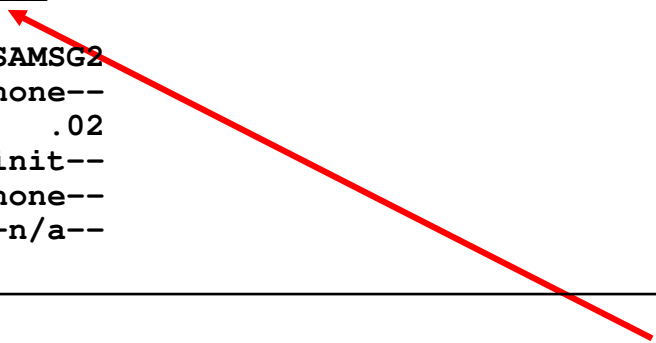
```
_____  ...ROISZI   VI...    01 11      VSIO.. IMSI 07/30/13 13:41:50      B

MPP     IMSAMSG1 IMSAMSG2
clas    --none-- --none--
cpu          .01      .02
ocup    --init-- --init--
tran    --none-- --none--
term     --n/a--  --n/a--
.RC
```

There are over 100 minors for the MPP major command. Creating a custom region screen allows the user to create a targeted region screen, and include more relevant information on that screen.

The .RC option will repeat and wrap the commands

Save The Customized Screen Space

```
/SAVE EDREGN_____    EDREGN   VTM      OI-II     V510./C IMSA 07/30/13 13:45:40

MPP     IMSAMSG1 IMSAMSG2
clas    --none-- --none--
cpu          .01      .02
ocup    --init-- --init--
tran    --none-- --none--
term     --n/a--  --n/a--
.RC
```

Use the /SAVE command to save the custom screen space.

Use the /REP command to replace an existing screen.

To invoke the screen enter the screen name on the command line.

Make screens for various filter options needed.

Making Custom Screen Spaces

```
                              -II      V510./C IMSA 07/30/13 14:01:23

 MPP     IMSAMSG1 IMSAMSG2
>.EXM
+          >> OD0170: 140 of 140 minor commands generated for MPP  <<
 acti   15:30 HR 15:30 HR
 aenv      >> Environmental Display in Init:
 asid   X'0041'  X'0042'
 auth   --n/a--  --n/a--
 bfwt   --n/a--  --n/a--
 call   --n/a--
 cdmb   --n/a--  --n/a--
 chng   --n/a--  --n/a--
 clas   --none--
 cmd    --n/a--
 cntn   --n/a--  --n/a
 coba   ---no--- ---no---
 cpcb   --none-- --none--
 cpu       .01      .02
 cpup
 ctrm   ---N/A--
 ctrn   ---N/A-- ---N/A--
 ctsk   ---N/A--
```

MAJOR command

Use the .EXM command to execute all the minors for a major

Minor commands

Custom screens may be made using major and minor commands and saved using the /SAVE command and updated using /REP.

Screen Logging

```
  /LOG ON_____        EDREGN    VTM LOG OI-II    V510./C IMSA
07/30/13 14:03:09

MPP    IMSAMSG1 IMSAMSG2
clas   --none-- --none--
cpu         .01      .02
ocup   --init-- --init--
tran   --none-- --none--
term    --n/a--  --n/a--
.RC
```

Classic screens may be logged.

/LOG ON to turn on

/LOG OFF to turn off

Log output goes to sysout on the OMEGAMON collector address space.

Useful to snapshot some screens, or screens over a period of time.

Executing A Screen Space Based Upon A Timer
TSF Command – Timed Screen Facility

```
_____  KOIRGNA   VTM LOG OI-II     V510./C IMSA 07/30/13 14:49:53


 .TSF01   TIME=1100   SS=EDREGN     DAY=DAILY
```

.TSF01 command to enter a timer. Enter the time and the screen to execute.

```
     _____  KOIRGNA   VTM LOG OI-II     V510./C IMSA 07/30/13 14:49:53

.TSF00
+        1    TIME=1100   SS=EDREGN     DAY=DAILY
+        2    TIME=0000   SS=*NONE*     DAY=DAILY
+        3    TIME=0000   SS=*NONE*     DAY=DAILY
+        4    TIME=0000   SS=*NONE*     DAY=DAILY
+        5    TIME=0000   SS=*NONE*     DAY=DAILY
```

.TSF00 command to list all the current timers that have been set.

TSF Requirements

- For TSF to operate the following is needed
  - An active OMEGAMON classic session
  - OMEGAMON running in auto update mode - /AUP ON
  - TSF has been set to ON - /TSF ON

- To log the screens execute by timer the Log needs to be set to ON

```
_____     KOIOPEA   VTM LOG OI-II     V510./C IMSA 07/30/13 14:51:57    0B
> Help PF1                         Back PF3                           Save Profile PF22
=========================================================================
>                              SET DISPLAY OPTIONS

> To change the value of an option, type the new value over the current one.
> Press ENTER to record the change.

 OPTN
:        ASF          = ON          BELL          = ON
:        BELLINT      =     60.00   DATEFORMAT    = USA
:        FIRSTSCREEN  = KOINITZZ    LOG           = ON
:        MINORCASE    = LOWER       SCREENCASE    = MIX
:        SCROLL       = PAGE        TSF           = ON
:        XLF          = ON          ZEROS         = ON

=========================================================================
```

Note Log is set to ON and TSF is set to ON.

OMEGAMON
Power User - Resources And References

- **OMEGAMON z/OS Classic Command Reference – SC27-4031**

  ▸ http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss?CTY=US&FNC=SRX&PBL=SC27-4031-00

- **OMEGAMON IMS Classic Command Reference – SC27-4437**

  ▸ http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss?CTY=US&FNC=SRX&PBL=SC27-4437-01

- **OMEGAMON DB2 Classic Command Reference -**

  ▸ http://pic.dhe.ibm.com/infocenter/tivihelp/v42r1/topic/com.ibm.omegamon.xe.pe_db2.doc_5.1.1/ko2ci_book.pdf

- **OMEGAMON CICS Users Guide – SC14-7474**

  ▸ http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss?CTY=US&FNC=SRX&PBL=SC14-7474-00

OMEGAMON Enhanced 3270 UI
The Newest OMEGAMON User Interface

- **All the core OMEGAMONs offer support for the Enhanced 3270 UI**
  - OMEGAMON z/OS, CICS, IMS, DB2, Storage, Mainframe Networks, Messaging

- **Enhanced 3270 UI offers many advantages**
  - Speed of native 3270 user interface for z/OS based monitoring
  - Superior integration across the monitoring environment
  - Ease of use

- **Enhanced 3270 UI power user scenarios**
  - Highlighting critical thresholds of monitored fields
  - Modifying how data is displayed on a panel
  - Adding zoom navigation to a critical field
  - Adding options to popup navigation

Enhanced 3270 UI – Common Customization Options

Highlight Monitored Fields

```
                          File   Edit   View   Tools   Options   Help        01/25/2013 08:33:50
                                                                             Auto Update   : Off
Command ==>                                                                  Plex ID   :
KOBSTART                              Enterprise Summary                     Sys ID    :

 ▾                              All Active CICSplexes                                    ▯▮▯▯☒

  Columns  2 to  6 of 19      ← │ → │ ↑ │ ↓     Rows        1 to        2 of        2

 ΔCICSplex   ▯ΔNumber of   ΔTransaction   ΔCPU          Any SOS    SOS
 ▽Name       ▯▽Regions     ▽Rate          ▽Utilization  Regions    Region
             ▯

 _ OMEGPLEX  ▯          5         0/m           0.0%     No        n/a
 _ RDZ       ▯          1         0/m           0.0%     No        n/a
```

Thresholds control highlighting

Tran rate threshold

CPU threshold

```
      Menu  Utilities  Compilers  Help

 BROWSE                               RKANPAR(KCPTHRSH) - 0 Line 00000026 Col 001 080
 ****************************************************************************************
 IF ( OMCICS.KCPPLX.TRANRATE        GT 1000/MIN                    OR
      OMCICS.KCPPLX.TRANRATE        LT 100/MIN
    )
    THEN DO
        STATUS ( CRITICAL 9 )
    ENDDO
 IF ( OMCICS.KCPPLX.TRANRATE        EQ 900/MIN<>1000/MIN           OR
      OMCICS.KCPPLX.TRANRATE        EQ 100/MIN<>300/MIN
    )
    THEN DO
        STATUS ( WARNING  4 )
    ENDDO
 IF ( OMCICS.KCPPLX.CPUUTIL         GT 300.0%                      OR
      OMCICS.KCPPLX.CPUUTIL         LT 10.0%
    )
    THEN DO
        STATUS ( CRITICAL 9 )
    ENDDO
 IF ( OMCICS.KCPPLX.CPUUTIL         EQ 200.0%<>300.0%              OR
      OMCICS.KCPPLX.CPUUTIL         EQ 10.0%<>20.0%
    )
    THEN DO
        STATUS ( WARNING  4 )
    ENDDO
```

Critical

Warning

Critical

Warning

Fields May Be Moved
Example - The Default OMEGAMON DB2 KDPTHRD Panel

The panel before
Scroll may be required to see workstation ID

How To Move The Workstation ID Column
Modify The DISPLAYCOLS Command

Note – updated panel s/b stored in UKANWENU

Before

```
 File  Edit  Edit_Settings  Menu  Utilities  Comp
EDIT                                UKANWENU(ZDB2THRD)
000119 DISPLAYCOLS='TDIDPLAN,
000120 THDXPIND(CAPTION="P/C"),           /*@D2A*/
000121 UTDIDAUTH(CAPTION="Auth ID",W=8),      /*@
000122 TDIDCORR(CAPTION="Corr ID"),
000123 THDXETIM,
000124 THDXCPUR,                              /*@
000125 WHNDBTIM(CAPTION="In-DB2_Elapsed_Time"), /*@
000126 WHNDBTCT(CAPTION="In-DB2_CP_CPU"),      /*@
000127 THWTTOTW,
000128 TDIDDB2S,
000129 THDXGETP,
000130 THDXUPDT,
000131 THDXCOMT,
000132 THDXREAD,
000133 THDXPFCH,
000134 THDXELCM(CAPTION="Elapsed_Per_Commit"),
000135 THDXDBCM(CAPTION="In-DB2_Per_Commit"),
000136 TDIDWKID,                          /*@D2A*
000137 TDIDTXID,                          /*@D2A*
000138 TDIDEUID,                          /*@D2A*
Command ===> _____
```
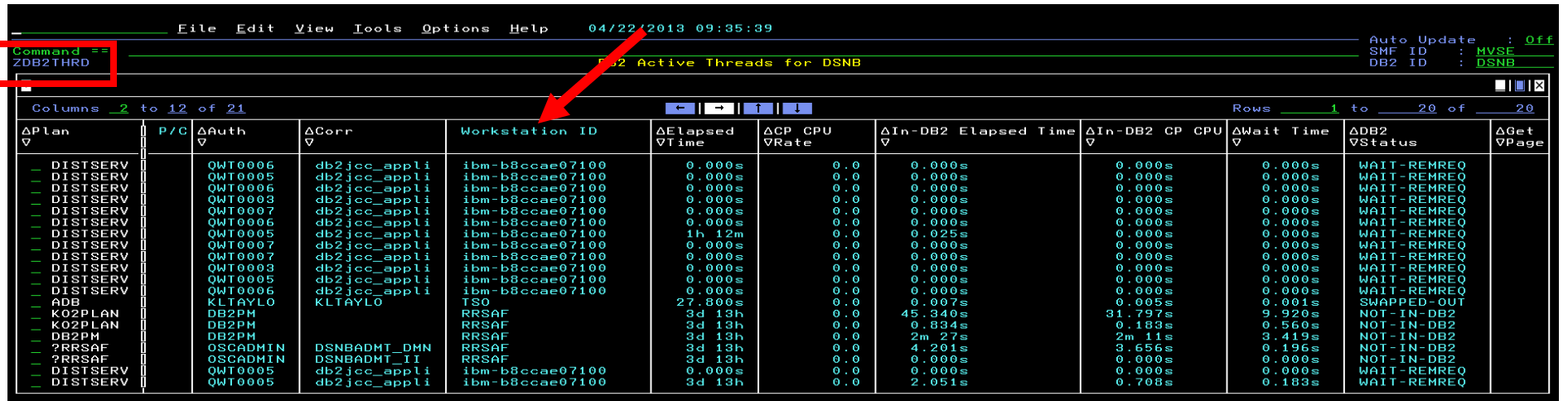
Edit to move up column reference

After

```
 File  Edit  Edi
EDIT                                UKANWENU(ZDB2THRD)
000119 DISPLAYCOLS='TDIDPLAN,
000120 THDXPIND(CAPTION="P/C"),           /*@D2A*/
000121 UTDIDAUTH(CAPTION="Auth ID",W=8),      /*
000122 TDIDCORR(CAPTION="Corr ID"),
000123 TDIDWKID,                          /*@D2A
000124 THDXETIM,
000125 THDXCPUR,                              /*
000126 WHNDBTIM(CAPTION="In-DB2_Elapsed_Time"), /*
000127 WHNDBTCT(CAPTION="In-DB2_CP_CPU"),      /*
000128 THWTTOTW,
000129 TDIDDB2S,
000130 THDXGETP,
000131 THDXUPDT,
000132 THDXCOMT,
000133 THDXREAD,
000134 THDXPFCH,
000135 THDXELCM(CAPTION="Elapsed_Per_Commit"),
000136 THDXDBCM(CAPTION="In-DB2_Per_Commit"),
000137 TDIDTXID,                          /*@D2A
000138 TDIDEUID,                          /*@D2A
Command ===> _____
```

The Newly Updated Panel

The Workstation ID column has been moved to the front of the panel

Note – In this example a new panel (ZDB2THRD) was created versus changing the product provided KIPTHRD panel

You may call up the new panel by entering the =panelname on the command line

Another Example
Using ZOOMCOLS To Add Drill Down Support

```
                    File  Edit  View  Tools  Navigate  Help    11/18/2013 08:21:39
_____
Command ==>
KIPHLTI                                                    IMS Health

                                                   IMS System Health for IMS IMSA

   Columns  2 to 11 of 11                                   ←  →  ↑  ↓
```

◊IMS ID	MVS ID	ENQ Rate	DEQ Rate	Tran Queue	Lock Waiters	Longest Lock	Dep Regions	CPU Percent	I/O Rate	Paging Rate
_ IMSA	MVSE	0.00	0.00	0	0	0.000s	2	0.00%	0.00	0.00

Before

```
                    File  Edit  View  Tools  Options  Help    05/08/2013 08:31:12
_____
Command ==>
ZIMS                                                      IMS Health

                                                   IMS System Health for IMS IMSA

   Columns  2 to 11 of 11                                   ←  →  ↑  ↓
```

◊IMS ID	MVS ID	ENQ Rate	DEQ Rate	Tran Queue	Lock Waiters	Longest Lock	Dep Regions	CPU Percent	I/O Rate	Paging Rate
_ IMSA	MVSE	0.00	0.00	13	0	0.000s	2	0.00%	0.00	0.00

After

How To Add ZOOMCOLS Support To A Field

```
 File  Edit  Edit_Settings  Menu  Utilities  Compilers  Test  Help

EDIT                        UKANWENU(ZIMS) - 01.12      Columns 00001 00072
000046 DISPLAYCOLS='IMSID,
000047 MVSID(CAPTION="MVS\ID"),
000048 ENQRATE(CAPTION="ENQ\Rate"),
000049 DEQRATE(CAPTION="DEQ\Rate"),
000050 TRANQUEUE(CAPTION="Tran\Queue"),
000051 LOCKWAIT(ALIGNRIGHT,CAPTION="Lock\Waiters"),
000052 LOCKELAP(ALIGNRIGHT,CAPTION="Longest\Lock"),
000053 REGCOUNT(ALIGNRIGHT,CAPTION="Dep\Regions"),
000054 TOTCPU(CAPTION="CPU\Percent",PERCENT),
000055 IORATE(CAPTION="I/O\Rate"),
000056 PAGERATE(CAPTION="Paging\Rate")'
000057 ZOOMCOLS='ENQRATE(KIPDEPS),DEQRATE(KIPDEPS),
000058 TRANQUEUE(KIPTRNS),LOCKWAIT(KIPLLKS),LOCKELAP(KIPLLKS),
000059 REGCOUNT(KIPDEPS),TOTCPU(KIPADRS),IORATE(KIPADRS),PAGERATE(KIPADRS)'
000060 KEYCOLS='IMSID, MVSID, LOCKWAIT, LOCKWAITPI, DSGROUP, PLEXNAME,
000061 IMSPLXNM, LOCKWAITIR, SQGROUP'
000062 ACTION=IMSID(!,"IMS Commands (ICMD)",KIPCMD)
000063 ACTION=IMSID(A,"Address Spaces",KIPADRS)
000064 ACTION=IMSID(B,"IMS Bottlenecks",ZIMSBTLP)
000065 ACTION=MVSID(C,"Coupling Facilty",KIPCFS10)
Command ===> _____     Scroll ===> PAGE
```

Add after DISPLAYCOLS

Specify the field and the destination panel

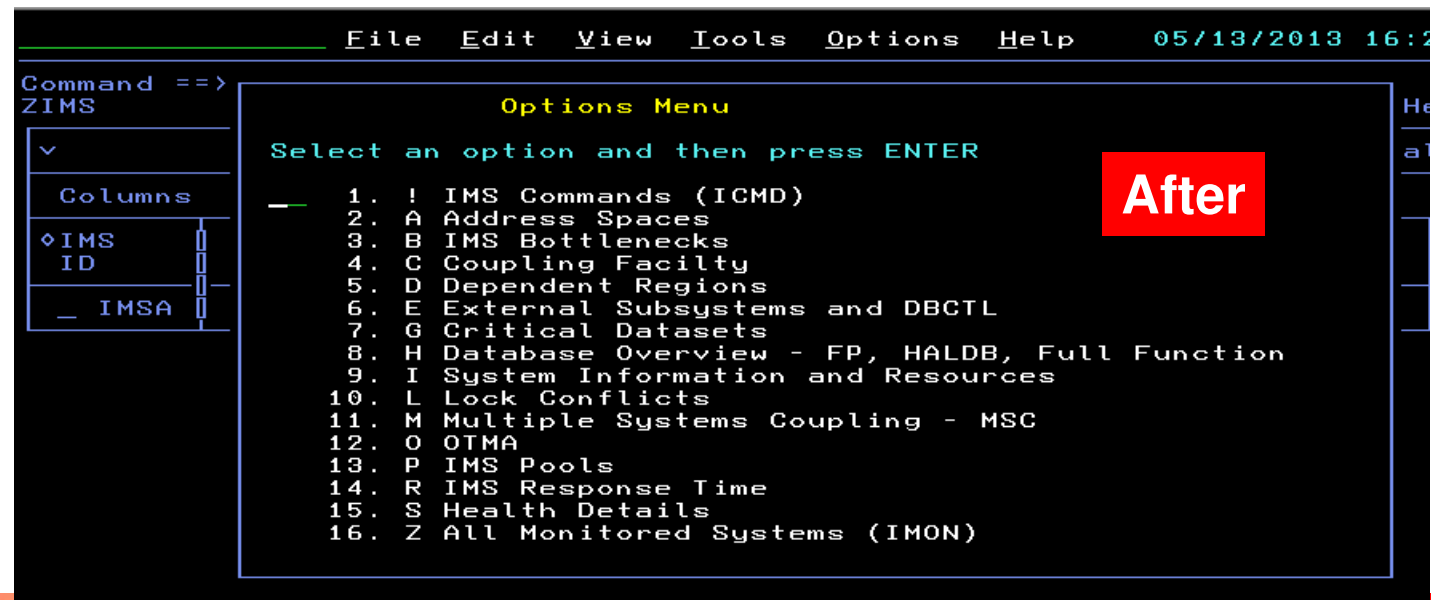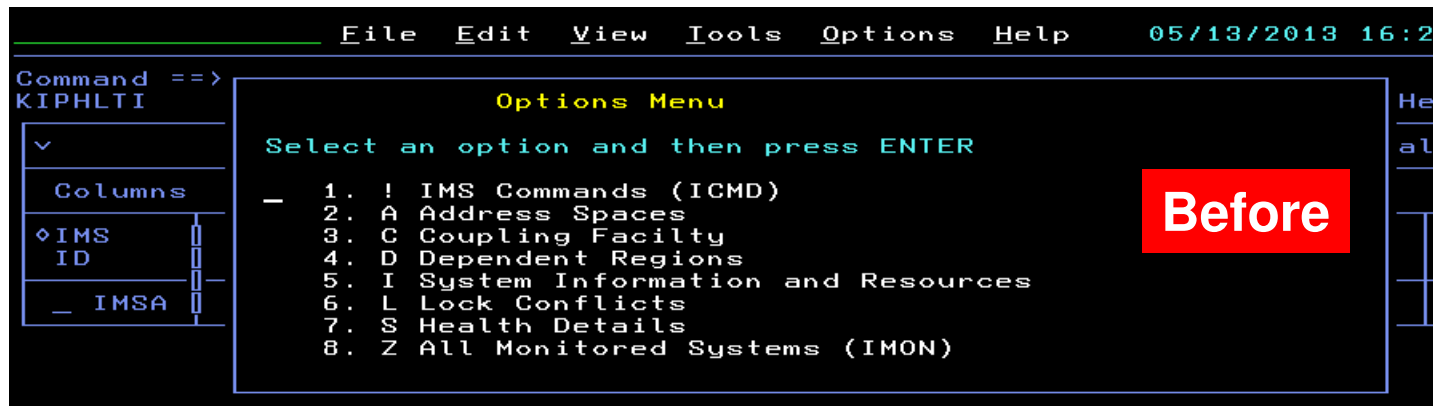# ZOOMCOLS Enables Drill Down In Context For More Detail

```
              File  Edit  View  Tools  Options  Help      05/08/2013 08:31:12
_____
Command ==> _____
ZIMS                                             IMS Health
┌─┐
│▼│                              IMS System Health for IMS IMSA
└─┘
  Columns  2 to 11 of 11                         [←][→][↑][↓]

◊IMS    MVS   ENQ         DEQ         Tran       Lock    Longest   Dep      CPU        I/O       Paging
 ID     ID    Rate        Rate        Queue      Waiters Lock      Regions  Percent    Rate      Rate

_  IMSA MVSE     0.00        0.00           13        0  0.000s        2      0.00%      0.00      0.00
```

```
              File  Edit  View  Tools  Options  Help      05/08/2013 08:33:09
_____
Command ==> _____
KIPDEPS                                          IMS Dependent Regions
┌─┐
│▼│                              All Dependent Regions for IMS IMSA
└─┘
  Columns  2 to 13 of 23                          [←][→][↑][↓]

ΔRegion   ΔIMS   Region    ΔTran   Region      ΔRegion     ΔRegion   ΔPSB    ΔElapsed    Δ
∇Name     ∇ID    Type      ∇Name   Status      ∇Occupancy  ∇ID       ∇Name   ∇Tran Time  ∇

_  IMSAMSG1 IMSA  Message           Idle            0.00%        2              N/A
_  IMSAMSG2 IMSA  Message           Idle            0.00%        1              N/A
```

Another Example
Adding Navigation Options To A Popup

Before

```
                        File  Edit  View  Tools  Options  Help      05/13/2013 16:2
Command ==>
KIPHLTI                          Options Menu                                     Hea
                                                                                  al
  v
                     Select an option and then press ENTER
  Columns
                  _   1. ! IMS Commands (ICMD)
 ◊IMS                 2. A Address Spaces
  ID                  3. C Coupling Facilty
                      4. D Dependent Regions
  _  IMSA             5. I System Information and Resources
                      6. L Lock Conflicts
                      7. S Health Details
                      8. Z All Monitored Systems (IMON)
```

After

```
                     File  Edit  View  Tools  Options  Help      05/13/2013 16:2
Command ==>
ZIMS                            Options Menu                                    He
                                                                               al
  v
                 Select an option and then press ENTER
  Columns
              _    1. ! IMS Commands (ICMD)
 ◊IMS              2. A Address Spaces
  ID               3. B IMS Bottlenecks
                   4. C Coupling Facility
  _  IMSA          5. D Dependent Regions
                   6. E External Subsystems and DBCTL
                   7. G Critical Datasets
                   8. H Database Overview - FP, HALDB, Full Function
                   9. I System Information and Resources
                  10. L Lock Conflicts
                  11. M Multiple Systems Coupling - MSC
                  12. O OTMA
                  13. P IMS Pools
                  14. R IMS Response Time
                  15. S Health Details
                  16. Z All Monitored Systems (IMON)
```

Adding Popup Navigation Options

```
 Menu   Utilities   Compilers   Help
 ──────────────────────────────────────────────────────────────────────

 BROWSE                        UKANWENU(ZIMS)        Line 00000060 Col 001 080
 KEYCOLS='IMSID, MVSID, LOCKWAIT, LOCKWAITPI, DSGROUP, PLEXNAME,
 IMSPLXNM, LOCKWAITIR, SQGROUP'
 ACTION=IMSID(!,"IMS Commands (ICMD)",KIPCMD)
 ACTION=IMSID(A,"Address Spaces",KIPADRS)
 ACTION=IMSID(B,"IMS Bottlenecks",ZIMSBTLP)
 ACTION=MVSID(C,"Coupling Facilty",KIPCFS10)
 ACTION=IMSID(D,"Dependent Regions",KIPDEPS)
 ACTION=IMSID(E,"External Subsystems and DBCTL",ZIMSEXT)
 ACTION=IMSID(G,"Critical Datasets",ZIMSDSN)
 ACTION=IMSID(H,"Database Overview - FP, HALDB, Full Function",ZIMSDB)
 ACTION=IMSID(I,"System Information and Resources",KIPRESPU)
 ACTION=IMSID(L,"Lock Conflicts",KIPLOK10)
 ACTION=IMSID(M,"Multiple Systems Counting - MSC",ZIMSMSC)
 ACTION=IMSID(O,"OTMA",ZIMSOTMA)
 ACTION=IMSID(P,"IMS Pools",ZIMSPOOL)
 ACTION=IMSID(R,"IMS Response Time",ZIMSRTA)
 ACTION=IMSID(S,"Health Details",KIPHLTD,DEFAULT)
 ACTION=IMSID(Z,"All Monitored Systems (IMON)",KIPMONS)
 <ONACTION>
 SET ZOMEGNAV1=&IMSPLXNM
 Command ===> _____  Scroll ===> PAGE
```

Each line represents an option in the popup

OMEGAMON
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- Enhanced 3270 Interface Guide - SC22-5426-00

  ▸ http://pic.dhe.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=%2Fcom.ibm.omegamon_share.doc_623fp1%2Fsource%2Fe3270%2Fe3270_interface.htm

- Other resources

  ▸ Ed Woods' blog - many examples of e3270ui customization

    - http://Tivoliwithaz.blogspot.com

Tivoli Enterprise Portal – The TEP Power User Considerations

- The "TEP" is the GUI interface for OMEGAMON monitoring
  - ▸ All the core OMEGAMONs offer support for the TEP
  - ▸ Critical systems managements tools offer support for the TEP
    - System Automation, NetView, Tivoli Workload Scheduler
    - IBM distributed monitoring (ITM) exploits the TEP
- The "TEP" provides powerful functions and capabilities
  - ▸ Flexible and customizable
- Typical TEP interface power user scenarios
  - ▸ Integrated systems management dashboard view
  - ▸ Integrated performance automation

Leverage OMEGAMON As Part Of An Integrated Dashboard Monitoring Strategy

TWS to track problem jobs

Alerts

Highlight potential issues

System Automation task status

System Automation critical messages

OMEGAMON z/OS tracks CPU usage

System Automation WTORs
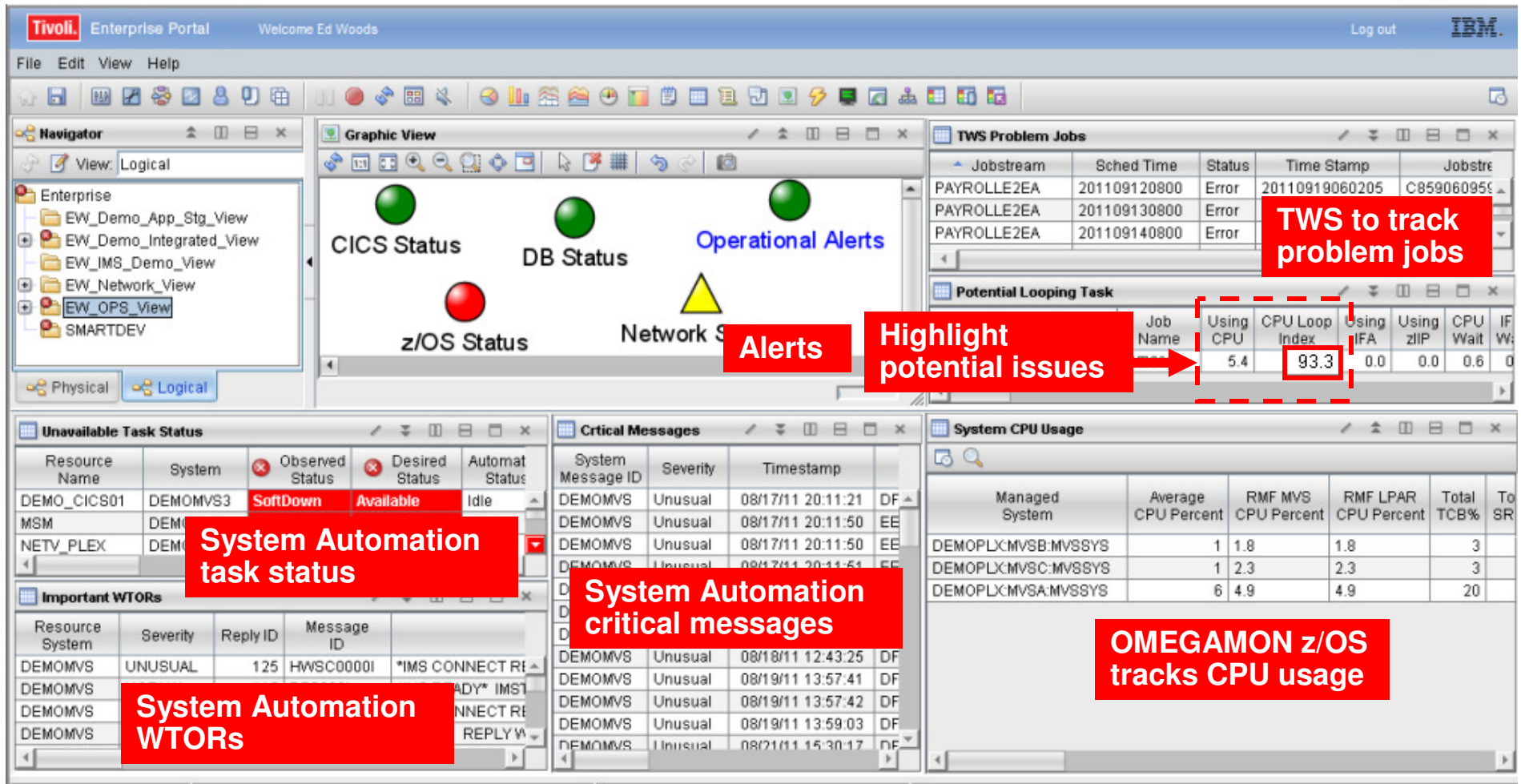
Using TEP To Build A Dashboard
The Navigation Tree Is Customizable

The navigation tree is user customizable.

Focus on most critical managed systems.

Graphics View
Blank Background With Shapes

Shapes work well to highlight alerts

Choose blank background

Choose shapes in the style options

Exploit Filter Options To Add Detail
Example – Add System Automation To The Dashboard

Threshold tab controls highlighting

Filters and queries control the panel content

Tivoli Enterprise Portal
Performance Automation Integrated Within The Portal

- **The Portal provides manual commands and corrections**
  - ▶ 'Take Action' provides for manual command capability
  - ▶ Commands may be predefined

- **The Portal enables automated commands and corrections**
  - ▶ Implement machine speed corrective actions, issue alerts, and allow for later human intervention
  - ▶ Use for automated commands for dynamic subsystem management and 'tweaks' as the workload and system changes
  - ▶ Two core types of automated actions
    - ***Situations*** - Use for simple "fire and forget" type of scenarios
    - ***Policies*** – Use for more sophisticated performance automation scenarios

Situations - A Basic Example
Alert On DB2 Threads With More Than 'n' Getpages

Situations for - Detailed Thread Exception

fx Formula   Distribution   Expert Advice   Action   Until

Description

Detailed Thread Exception
EW_Thread...
MVS DB2
KDP_V
KDP_V

Create New...
Create Another...
Start Situation
Stop Situation
Delete Situation
Associate
Dissociate

**Distribution tab to specify where situation runs.
Expert advice is customizable.
Action tab to execute command.**

**Start/stop
situation**

Formula

Getpage Count

1 > 1000
2
3

**Specify alert criteria.
This may include one or
multiple attribute criteria.**

Click inside a cell of the formula editor to see a description of the attribute for that column and to compose the expression.

Add a condition by clicking **Add conditions** and selecting the situations to embed or attributes you want to include.

Situation Formula Capacity   5%

Add conditions...   Advanced...

Specify sampling interval

Sampling interval

0 / 0 : 1 : 30
ddd hh mm ss

Sound
☐ Enable critical.wav
Play   Edit...

State
⊗ Critical
☐ Run at startup

**Specify severity and whether to
run at Omegamon startup**

OK   Cancel   Apply   Help

Situations
'Action' To Perform Commands And Corrections

Where command is executed

Attribute substitution in the command line

System commands may be executed when the situation is true

Examples of actions include:
DB2 thread kill command
Issuing messages to the console
Any valid z/OS console command
Issuing commands to drive notification

An OMEGAMON DB2 Situation Example
Addressing A "Runaway" DB2 Thread

Situation logic has detected a possible runaway DB2 thread

System command may be executed when the situation is true

Example – DB2 thread kill command

Where command is executed

Command result

Policies Expand The Concept Of Situations
Allow Multiple Situations Checks And Commands
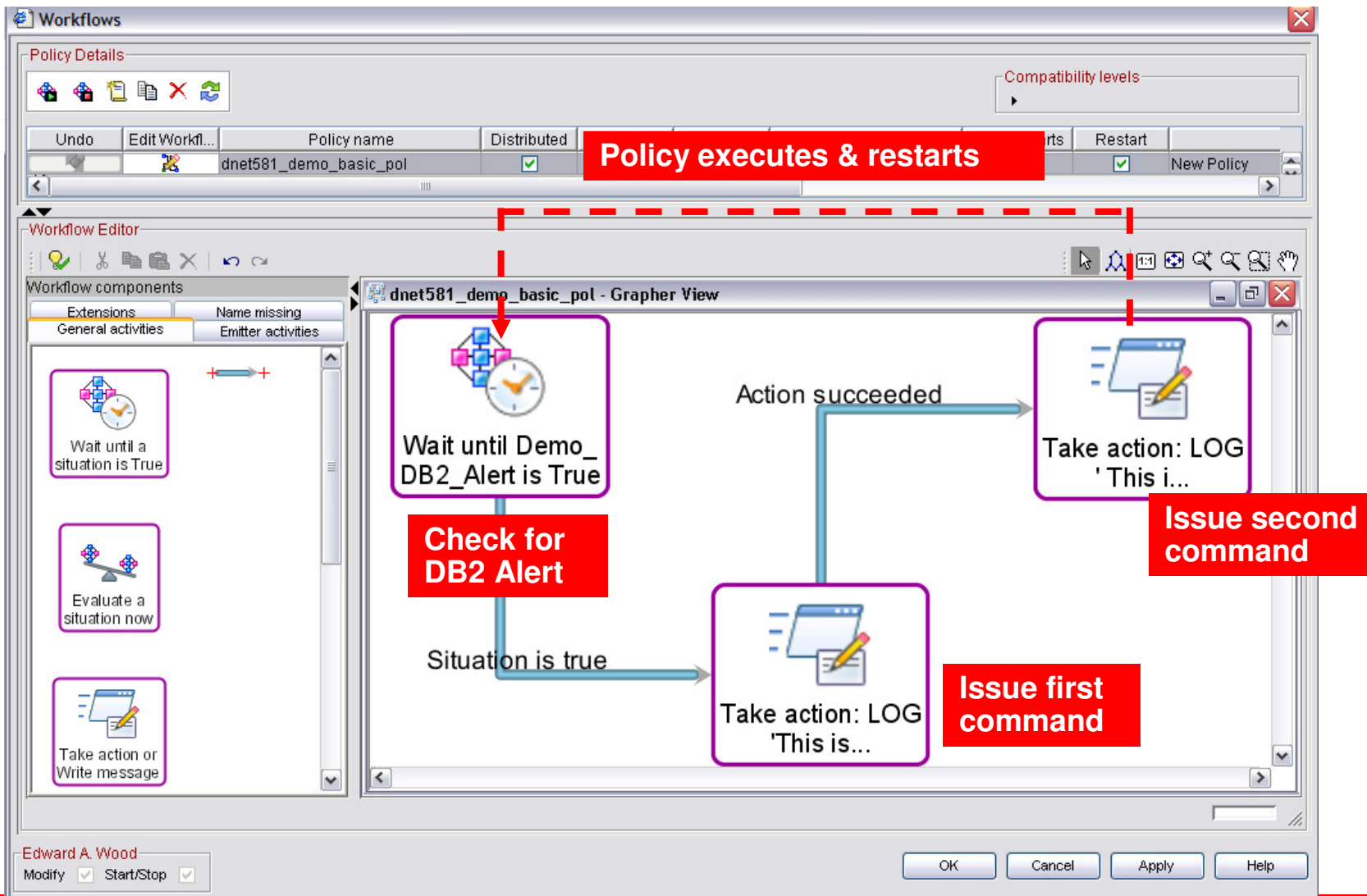
Policy Command Execution
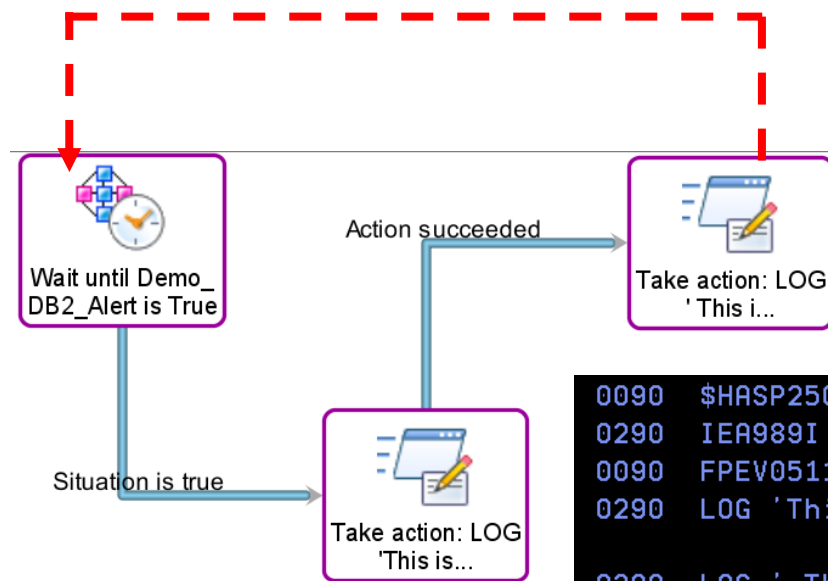
In the example the policy will:

**Check the situation status
Execute the first command
Execute the second command
Restart**

Wait until Demo_
DB2_Alert is True

Action succeeded

Take action: LOG
' This i...

Situation is true

Take action: LOG
'This is...

Note – The interval of the situation will have an impact on the duration of the policy

```
0090   $HASP250 DNET145 PURGED -- (JOB KEY WAS C1C5C854)
0290   IEA989I SLIP TRAP ID=X33E MATCHED.  JOBNAME=          51.
0090   FPEV0511I  DSNB HISTORY DATA SET WRAPPED, 4272 INTERVALS STORED
0290   LOG 'This is a test message - DB2 message ADHPLAN3'

0290   LOG ' This is a second test message'

0290      Restart
0290   IEA989I SLIP TRAP ID=X33E MATCHED.  JOBNAME=          51.
0290   LOGON
0290   LOG 'This is a test message - DB2 message ADHPLAN3'

0290   LOG ' This is a second test message'

0281   $HASP100 DNET581  ON TSOINRDR
0090   $HASP373 DNET581  STARTED
0090   IEF125I DNET581 - LOGGED ON - TIME=10.06.27
```

First command

Second command

First command

Second command

Policies Require An Understanding Of The Monitoring Infrastructure

Distribution of policies requires a more complete understanding of the monitoring topology
- **What agents?**
- **Agents on what platforms?**
- **What TEMS?**
- **TEMS on what platforms?**

Windows
ITM TEMA

UNIX
ITM TEMA

Linux
ITM TEMA

Portal Server TEPS

TEMS Remote

OMEGAMON TEMA

OMEGAMON TEMA

TEMS HUB

TEMS Remote

OMEGAMON TEMA

OMEGAMON TEMA

z/OS

z/OS
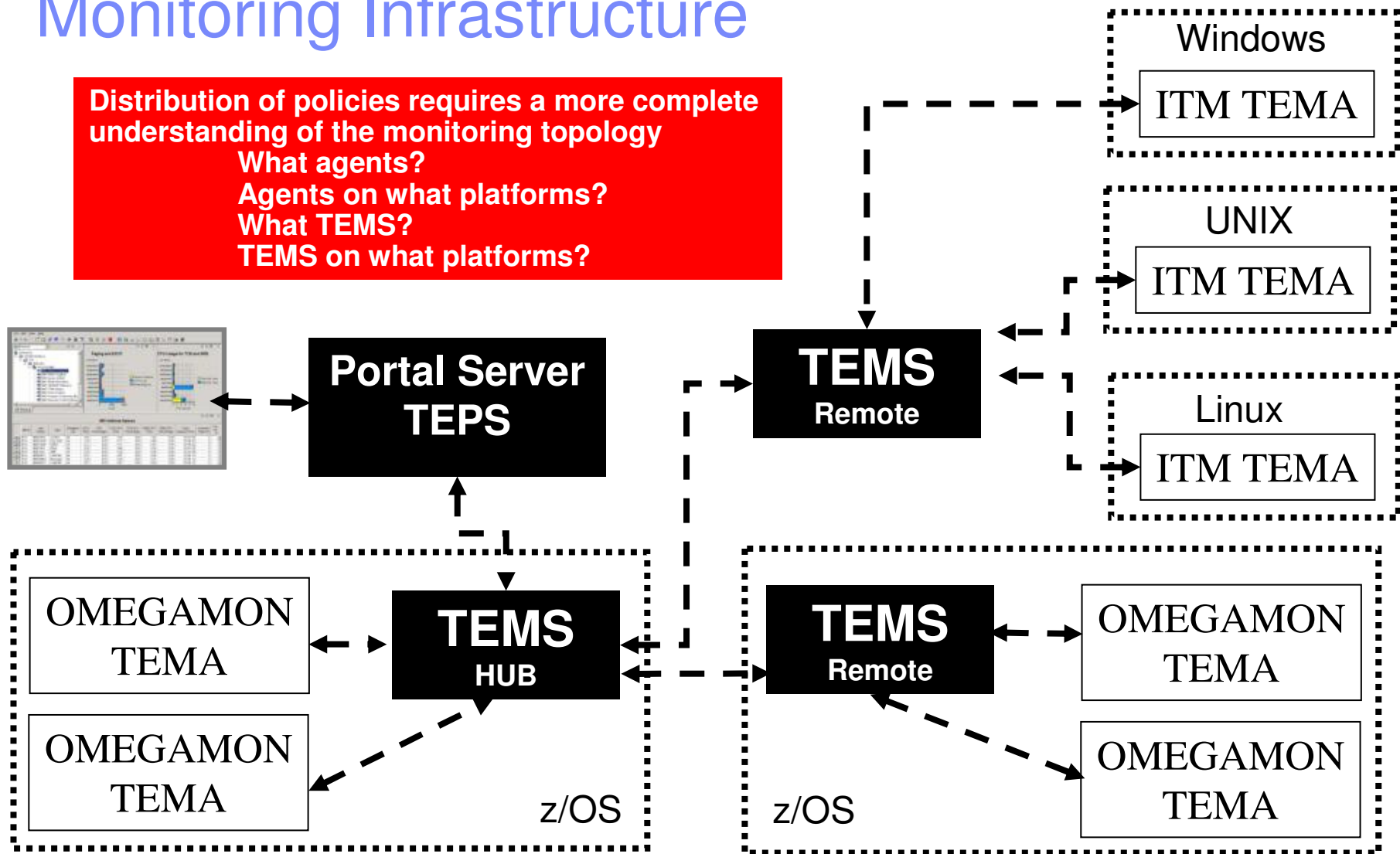
Recommendations And Best Practices
Situations And Policies
What They Are And What They Are Not

- **Situations And Policies – What they are**
  - ▸ Situations are the core alert building block of Tivoli monitoring
  - ▸ Policies extend concepts established with situations and add additional functionality to the TEP
  - ▸ Policies expand the integrated command and control capabilities of the TEP
    - Situations remain the essential starting point
  - ▸ Policies add additional function and flexibility to situation capabilities

- **Situations And Policies – What they are not**
  - ▸ The command capabilities of situations and policies are not a substitute for a full function automation engine such as IBM System Automation
    - Use situations and/or policies for basic detection and command/correction scenarios
    - Use situations and/or policies to drive SA automation execs when needed
    - For more detailed scripts (such as REXX) and analysis use System Automation

Another Example
Using Policies To Manage The OMEGAMON PoT Workload
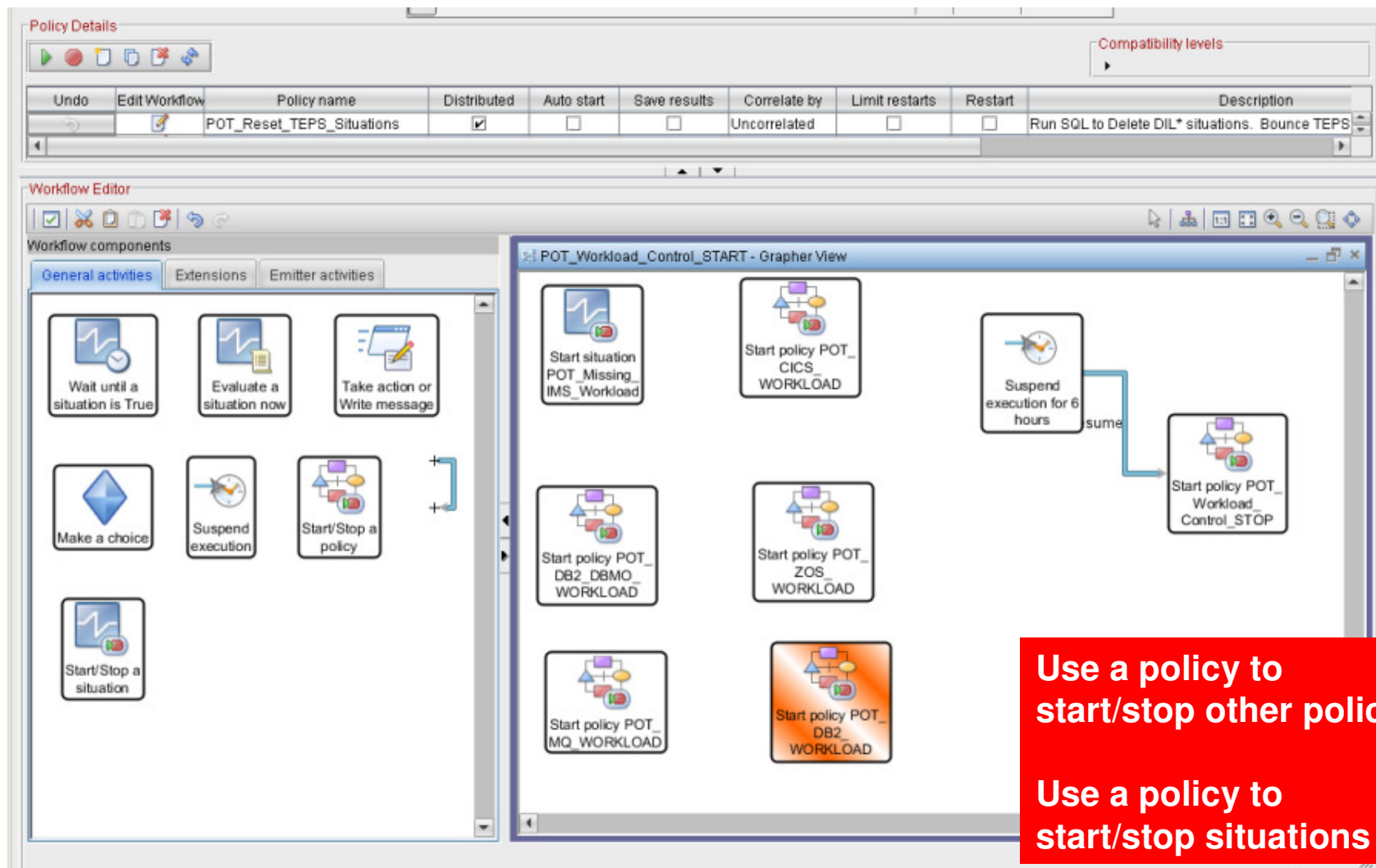
Use a policy to start/stop other policies

Use a policy to start/stop situations

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- **Other relevant OMEGAMON presentations**

  - **Top 10 Problem Solving Scenarios Using IBM OMEGAMON and the Tivoli Enterprise Portal**

    ftp://ftp.software.ibm.com/software/systemz/telecon/22jul/July_22_Telecon_Top_10 _Problem_Solving_Scenarios_-_OMEGAMON_and_Tivoli_Enterprise_Portal.pdf

  - **Leveraging Tivoli Enterprise Portal**

    ftp://ftp.software.ibm.com/software/os/systemz/summit/handouts/Track_5_-_06_- _Leveraging_Tivoli_Enterprise_Portal.pdf

    Tivoli Enterprise Portal Customization Tips and Techniques

    ftp://ftp.software.ibm.com/software/systemz/pdf/June_26_Telecon_Tivoli_Enterprise _Portal_Customization_Tips_and_Techniques.pdf

Summary

- Being a "Power User" means leveraging the most powerful capabilities of a technology

- OMEGAMON provides a choice of interfaces and options
  - Each interface (Classic, e3270ui, TEP) offers a unique set of capabilities
  - Leverage the appropriate interface to address requirements
    - Classic
      - Speed, reliability, power user function and flexibility
    - E3270ui
      - Speed, integration, ease of use
    - TEP
      - Integrated views, dashboards, alerts, integrated automation

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- **Various Share Conference OMEGAMON presentations**
  - ▸ DB2 Performance Tuning Using Omegamon DB2 Performance Expert - Use Case Examples and Practical Applications
    https://share.confex.com/share/120/webprogram/Session12693.html
  - ▸ Automated Performance Management Using IBM Tivoli: Techniques And Best Practices (a new presentation I created for this Share event)
    https://share.confex.com/share/120/webprogram/Session12880.html
  - ▸ Tuning Tips To Lower System z Costs with OMEGAMON Monitoring
    https://share.confex.com/share/119/webprogram/Session11791.html
  - ▸ Understanding The Impact Of The Network On z/OS Performance
    https://share.confex.com/share/119/webprogram/Session11900.html

- **Other presentations**
  - ▸ Top 10 Problem Solving Scenarios Using IBM OMEGAMON and the Tivoli Enterprise Portal
    ftp://ftp.software.ibm.com/software/systemz/telecon/22jul/July_22_Telecon_Top_10_Problem_Solving_Scenarios_-_OMEGAMON_and_Tivoli_Enterprise_Portal.pdf

Want To Try Out What We Discussed Here?

■ *OMEGAMON Hands-On Labs*

- 14901: OMEGAMON V5 Enhanced 3270 Hands-on Lab
  - ▶ Lih Wang – Monday, 1:30 PM

- 14770: OMEGAMON Advanced Topics: User Interface Customization and the Tivoli Enterprise Portal – Hands-on Lab
  - ▶ Ed Woods, Joe Means – Tuesday 6 PM

- 14908: Become An OMEGAMON Power User
  - ▶ Ed Woods - Monday, 11AM

Check Out My Blog
http://tivoliwithaz.blogspot.com

Thank You!!

14908: Become An OMEGAMON Power User
Ed Woods - Monday, 11AM